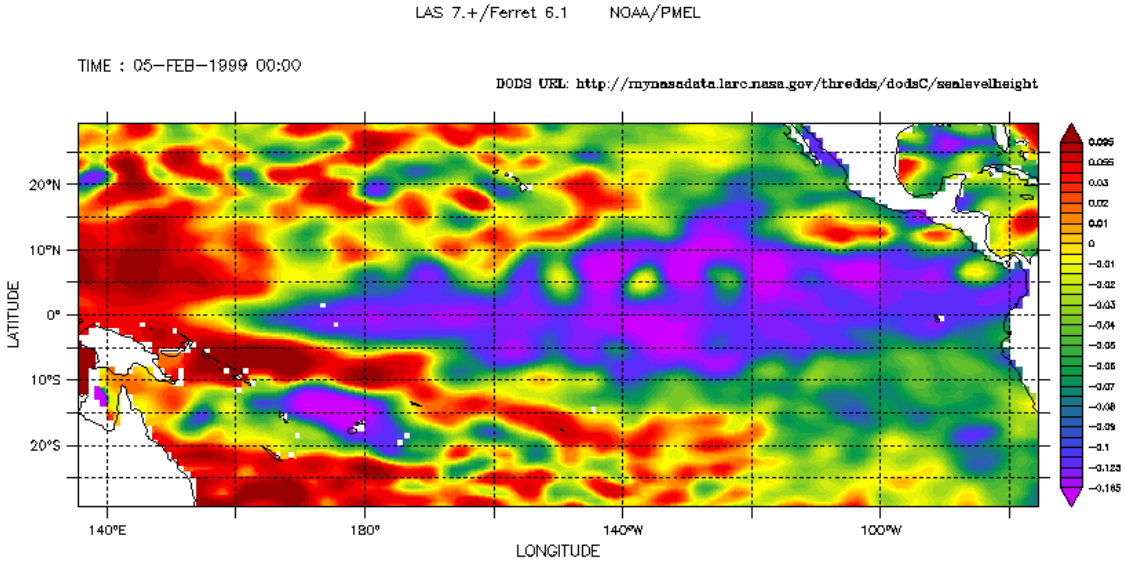
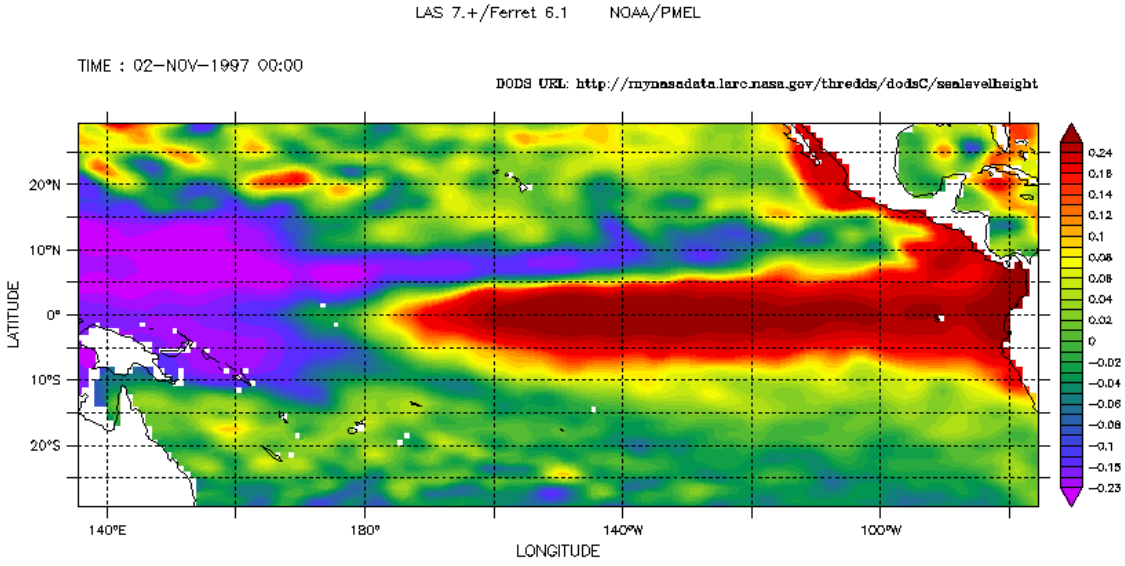
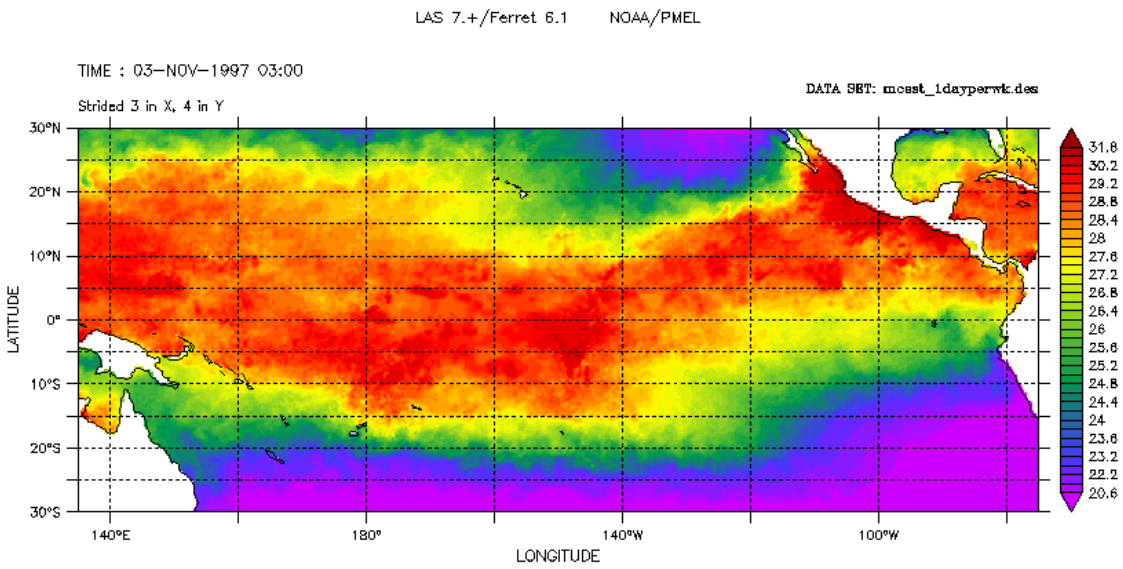
Lesson I: El Nino Lesson



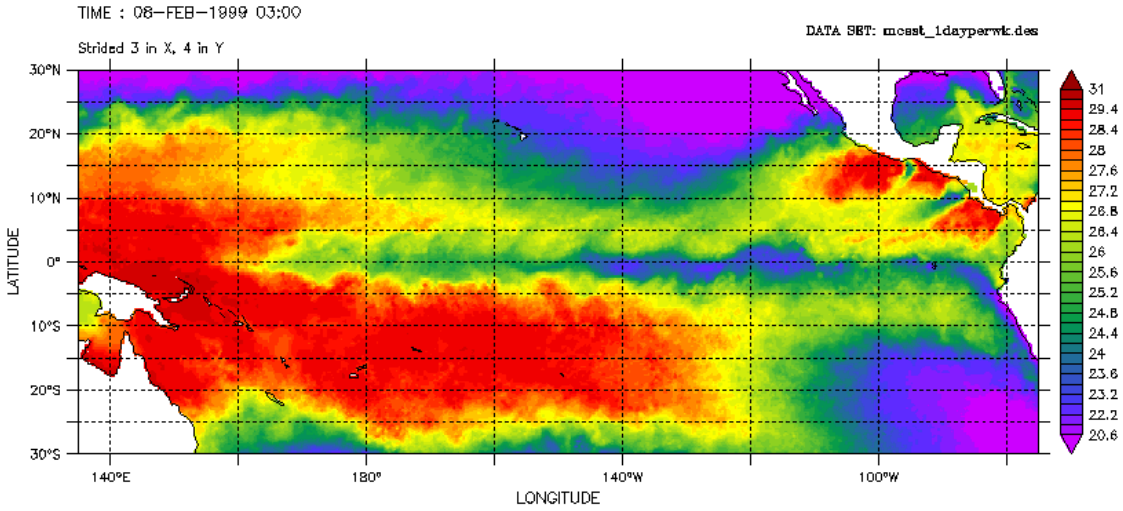
5-day Sea Level Height (TOPEX/POSEIDON) (meters)



5-day Sea Level Height (TOPEX/POSEIDON) (meters)

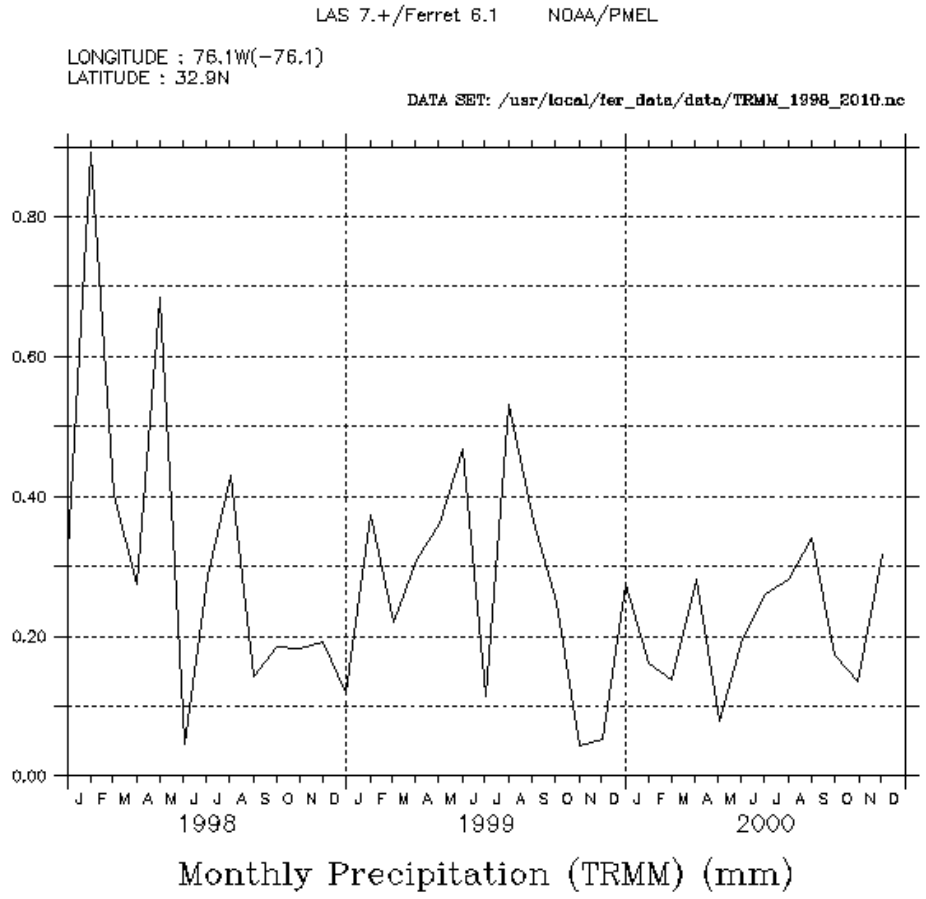


Weekly Sea Surface Temperature (MCSST) (degC)



Weekly Sea Surface Temperature (MCSST) (degC)

Coordinates for NASA Langley Research Center in Hampton, VA



Questions:

1. How are the ocean water temperature and sea level correlated?

The warmer temperatures correlate with the higher sea level.

2. What happens to the fishing industry in the eastern Pacific during El Nino? Why?

As the water temperature increases, the population of fish decreases. This lower population of fish significantly declines the productivity in the fishing industry.

3. Based on your line plot, is there evidence that ENSO affects your local precipitation?

According to my line plot of Hampton, Virginia there is an affect from ENSO, demonstrated by the significantly higher levels of precipitation during the winter months in the end of 1997-early 1998. Students should be able to look at line plot and find the maximum and minimum values of precipitation and then make a decision on whether their location is affected by ENSO. They should then explain their decision.

Extensions:

1. Students may research and discover other time periods of El Nino and La Nina cycles to see if the results are consistent.

2. Students may also explore cloud cover and net radiation data during ENSO events. See the Lesson Link on CERES Radiative Anomalies for further explanation.